AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-15. (Canceled)

16. (Previously Presented) A process for forming an insulating film on the surface of a substrate for an electronic device, comprising the steps of:

cleaning the substrate with plasma based on a cleaning gas comprising a rare gas;

oxidizing the substrate with plasma based on an oxidizing gas comprising a rare gas and oxygen, to thereby form an oxide film thereon;

nitriding the oxide film with plasma based on a nitriding gas comprising a rare gas and nitrogen after the oxidizing; and

treating the oxide film with plasma based on a treating gas comprising hydrogen gas after the nitriding;

wherein the cleaning and oxidizing are conducted under the same operation principle; and

the cleaning and oxidizing are conducted in the same vessel without exposure of the substrate to air.

2 ~~17.~~ (Previously Presented) A process for forming an insulating film according to claim 16, wherein the cleaning gas comprises hydrogen gas.

3 ~~18.~~ (Previously Presented) A process for forming an insulating film according to claim 16, wherein the cleaning is conducted at a pressure of 7-133 Pa.

19-22. (Canceled)

4 ~~23.~~ (Previously Presented) A process for forming an insulating film according to claim 16, which further comprises forming a High-k film after the treating.

24. (Canceled)

11 ~~25.~~ (Previously Presented) A process for forming an insulating film on the surface of a substrate for electronic device, comprising the steps of:

cleaning the substrate with plasma based on a cleaning gas comprising a rare gas;

nitriding the substrate with plasma based on a nitriding gas comprising a rare gas and nitrogen, to thereby form a nitride film thereon;

oxidizing the nitride film with plasma based on an oxidizing gas comprising a rare gas and oxygen after the nitriding; and

treating the nitride film with plasma based on a treating gas comprising hydrogen gas after the oxidizing;

wherein cleaning and nitriding are conducted under the same operation principle; and

the cleaning and nitriding are conducted in the same vessel without exposure of the substrate to air.

12 ~~26~~. (Previously Presented) A process for forming an insulating film according to claim 25, wherein the cleaning gas comprises hydrogen gas.

13 ~~27~~. (Previously Presented) A process for forming an insulating film according to claim 25, wherein the cleaning is conducted at a pressure of 7-133 Pa.

28-31. (Canceled)

14 ~~32~~. (Previously Presented) A process for forming an insulating film according to claim 25, which further comprises forming a High-k film after the treating.

33-41. (Canceled)

5 42. (Previously Presented) A process for forming an insulating film according to claim 16, wherein the nitriding and/or treating is conducted in a processing chamber that is the same as or different from the processing chamber wherein the cleaning and oxidizing are conducted.

43-44. (Canceled)

16 45. (Previously Presented) A process for forming an insulating film according to claim 25, wherein the oxidizing and/or treating is conducted in a processing chamber that is the same as or different from the processing chamber wherein the cleaning and nitriding are conducted.

46-53. (Canceled)

6 54. (Previously Presented) A process for forming an insulating film according to claim 16, wherein the plasma is generated using microwave irradiation by using a plane antenna member having a plurality of slots.

18 55. (Previously Presented) A process for forming an insulating film according to claim 25, wherein the plasma is generated using microwave irradiation by using a plane antenna member having a plurality of slots.

7 ~~56.~~ (Previously Presented) A process for forming an insulating film according to claim 23, wherein the High-k film comprises one material selected from the group consisting of Al_2O_3, ZrO_2, HfO_2, Ta_2O_5, ZrSiO, HfSiO and ZrAlO.

57. (Canceled)

15 ~~58.~~ (Previously Presented) A process for forming an insulating film according to claim 32, wherein the High-k film comprises one material selected from the group consisting of Al_2O_3, ZrO_2, HfO_2, Ta_2O_5, ZrSiO, HfSiO and ZrAlO.

59-63. (Canceled)

8 ~~64.~~ (Previously Presented) A process for forming an insulating film according to claim 16 wherein the insulating film is a gate insulator.

17 ~~65.~~ (Previously Presented) A process for forming an insulating film according to claim 25 wherein the insulating film is a gate insulator.

66-70. (Canceled)

9 ~~71.~~ (Previously Presented) A process for forming an insulating film according to claim 16 wherein the substrate is subjected to wet cleaning prior to the plasma cleaning.

10 ~~72.~~ (Previously Presented) A process for forming an insulating film according to claim 25 wherein the substrate is subjected to wet cleaning prior to the plasma cleaning.